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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,396	12/21/2001	Barnes Cooper	42390P13462	1140
8791	7590	05/23/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			STOYNOV, STEFAN	
			ART UNIT	PAPER NUMBER
			2116	

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,396

Applicant(s)

COOPER, BARNES

Examiner

Stefan Stojnov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-18 and 21-28 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 19, 20, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

Response to Arguments

Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 11 is not limited to tangible embodiments. In view of Applicant's disclosure, specification paragraph 0015, lines 11-21, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., processor readable medium including a semiconductor memory device, a ROM, a flash memory, an EPROM, a floppy disk, CD-ROM, hard disk) and intangible embodiments (e.g., program code segments transmitted by a computer data signal embodied in a carrier wave, or signal modulated by a carrier wave, over a transmission medium; processor readable medium including a radio frequency (RF) link; transmission medium such as air, electromagnetic, RF links). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

To overcome this type of 101 rejection the claim 11 needs to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-8, 14-18, and 24-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 14, and 24 depend on claims 1, 11, and 21 where alternative language is used to describe the interaction between the SMI handler and either a performance state control applet or a thermal driver in a thermal management operating system (OS).

Whereas, claims 4, 14, and 24 imply the presence for both a speed step technology (SST) applet and thermal management OS. Accordingly, it is unclear what elements are required by the claims.

If the applicant desires the presence for both the performance state control applet and the thermal driver in a thermal management operating system (OS), claims 1, 11, and 21 need to be modified to account for that.

Claims 5-8, 15-18, and 25-28 are similarly indefinite being dependent on claims 4, 14, and 14.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson in view of Orton.

Re claims 1, 11, and 21, Hobson discloses a method, a computer program product and a system comprising:

invoking a system management interrupt (SMI) handler in response to an SMI (column 2, line 67, column 3, lines 2-4);

determining a thermal state of a processor by the SMI handler (column 3, lines 2-4); and

Re claim 21, in addition Hobson discloses a processor (FIG. 1, 108), and a memory coupled to the processor to store a thermal management module (column 4, lines 47-54-, FIG. 1).

Hobson fails to disclose interacting between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status.

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Orton teaches different events triggering performance state transitions (column 8, lines 12-13), such events being over-temperature conditions where a predefined temperature threshold in a thermal zone of the computer system has been violated (column 8, lines 18-22). Orton further teaches handling the performance state change events by generating a system management interrupt (SMI) such that an SMI handler is invoked (column 8, lines 27-29). Further, Orton teaches the power management module may be implemented as a software module, in system firmware (e.g., BIOS or SMI handler), as a part of a device driver, or as a combination of the above (column 8, lines 35-38). The power management module determines if a performance state change is to be employed in response to the received event (column 8, lines 38-40). Since Orton teaches the power management module (may be implemented as a part of the operating system and responsible for transitioning the processor to different performance states) (column 8, lines 35-37, lines 47-48), Orton also teaches native performance control status (see applicant's definition for "native performance control" – paragraph 0032, lines 16-18). In Orton, the performance state switching is performed after the processor is placed into a low activity state, thus system reset may be avoided to switch performance states (column 11, lines 59-62). In addition, by switching states depending on how the computer system is being utilized, system performance may be improved "on the fly" without user intervention (column 11, lines 63-67).

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to use the interaction between the SMI handler and the device driver and/or the operating system (capable of controlling the processor's performance state transitions), as suggested by Orton for the method, computer program product,

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and system disclosed by Hobson in order to implement interacting between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status, thus avoiding system reset when switching performance states and improving system performance "on the fly" without user intervention.

Re claims 2, 12, and 22, Hobson further discloses the method, program product, and system comprising:

invoking the SMI at predetermined time intervals (column 2, line 67, column 3, lines 1-2).

Re claims 3, 13, and 23, Hobson further discloses the method, program product, and system comprising:

Reading a sensor indicating temperature of the processor (column 2, lines 41-42).

Allowable Subject Matter

Claims, 9, 10, 19, 20, 29, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Re claims 9, 19, and 29, the prior art fails to disclose or suggest the method, computer product, and system as per claims 1, 11, and 21, wherein "if interacting

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includes interacting between the SMI handler and the performance state control applet, the method further comprises: processing a performance state control command using the performance state control applet”.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Stoynov whose telephone number is (571) 272-4236. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SS



REHANA PERVEEN
PRIMARY EXAMINER

5/19/05